Datasheet for ABIN2669726

# SMARCA4 Protein (AA 1448-1569) (GST tag)

2 Images

Go to Product page

## Overview

| | |
|---|---|
| Quantity: | 100 µg |
| Target: | SMARCA4 |
| Protein Characteristics: | AA 1448-1569 |
| Origin: | Human |
| Source: | Escherichia coli (E. coli) |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This SMARCA4 protein is labelled with GST tag. |
| Application: | Binding Studies (Bind), Screening Assay (ScA) |

## Product Details

| | |
|---|---|
| Characteristics: | The peptide corresponding to amino acids 1448-1569 that contains the bromodomain sequences of SMARCA4 (accession number NP_003063.2) was expressed in E. coli and contains an N-terminal GST tag with an observed molecular weight of 41.6 kDa. It shows binding specificity for acetylated H2BK5, H3K14 and H3K9/14. |

## Target Details

| | |
|---|---|
| Target: | SMARCA4 |
| Alternative Name: | SMARCA4 / BRG1 (SMARCA4 Products) |
| Background: | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 4 (SMARCA4), also known as BRG1, is a member of the SWI/SNF family of proteins and is similar to the Brahma protein of Drosophila. Members of this family have helicase and |

## Target Details

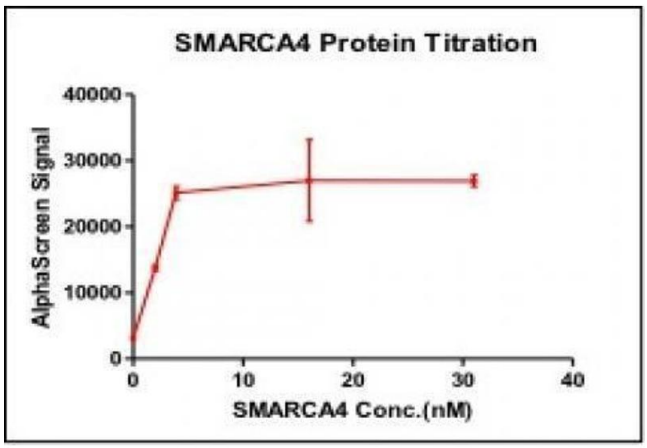
| | |
|---|---|
| | ATPase activities and are thought to regulate transcription of certain genes by altering the chromatin structure around those genes. SMARCA4 contains bromodomains for interaction with other proteins. The bromodomain functions as a 'reader' of epigenetic histone marks and regulates chromatin structure and gene expression by linking associated proteins to the recognized acetylated nucleosomal targets. SMARCA4 is part of the large ATP-dependent chromatin remodeling complex SNF/SWI which is required for transcriptional activation of genes normally repressed by chromatin. In addition, this protein can bind BRCA1, as well as regulate the expression of the tumorigenic protein CD44. Gene mutation causes Rhabdoid Tumor Predisposition Syndrome Type 2. SMARCA4 functions as a transcriptional coactivator cooperating with nuclear hormone receptors to potentiate transcriptional activation. It also interacts with glucocorticoid receptor (GR), TOPBP1 and progesterone receptor (PR) and is a component of the BAF53 complex which acetylates histone H4 and H2A within nucleosomes. Somatic mutations of SMARCA4 have been detected in some cancer cell lines and loss of SMARCA4 is associated with decreased survival in cancer patients. |
| Molecular Weight: | 41.6 kDa |
| Pathways: | Intracellular Steroid Hormone Receptor Signaling Pathway, Regulation of Intracellular Steroid Hormone Receptor Signaling, Stem Cell Maintenance |

## Application Details

| | |
|---|---|
| Application Notes: | Recombinant SMARCA4 / BRG1 (1448-1569), GST-tag is suitable for use in binding assays, inhibitor screening, and selectivity profiling. |
| Restrictions: | For Research Use only |

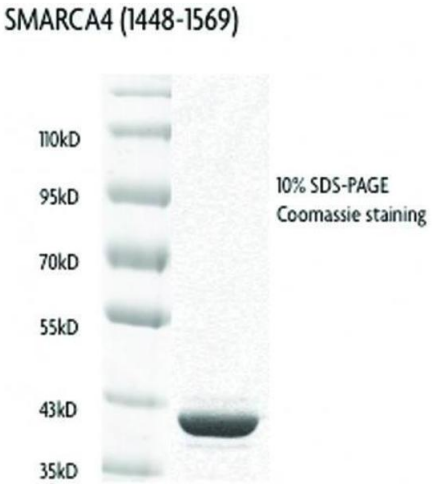
## Handling

| | |
|---|---|
| Handling Advice: | Avoid repeated freeze/thaw cycles and keep on ice when not in storage. |
| Storage: | -80 °C |
| Storage Comment: | Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. |




## Activity Assay

**Image 1.** Recombinant SMARCA4 / BRG1 (1448-1569), GST-tag activity using AlphaLISA. SMARCA4 / BRG1 (1448-1569), GST-tag was used in an AlphaLISA assay to determine enzyme linearity. This data was generated and kindly provided courtesy of ChemPartner.




## Western Blotting

**Image 2.** Recombinant SMARCA4 / BRG1 (1448-1569), GST-tag protein gel. SMARCA4 / BRG1 (1448-1569), GST-tag protein was run on an SDS-PAGE gel and stained with Coomassie blue.